

Listing of Claims including amendments to the claims:

This listing of claims will replace all prior versions, and listings, of claims in the Application.

Claims 1-4, 10-11, 13-21 have been cancelled by this Amendment.

New independent claims 22, 29 and 30 and dependent claims 23-28 have been added by this Amendment.

4 independent claims now pending: 5, 22, 29 and 30.

11 dependent claims now pending: 6, 7, 8, 9, 12, 23, 24, 25, 26, 27 and 28.

1-4. (Cancelled)

5. (Currently Amended) A method for graphically representing interactions between of three or more entities who are members of an organization, wherein each entity is a person or a group of persons and wherein at least two entities directly interact with multiple entities ~~individual members~~ within a ~~unit of persons of an~~ said organization and/or persons who are not members of said organization and wherein the environment of each organization member entity comprises at least one entity, which comprises:

(a) determining a connectivity measure for each of said member entities wherein said connectivity measure comprises means for measuring the strength by which each entity is connected to its environment ~~individual member of the unit;~~

(b) determining a diversity measure for each of said member entities wherein said diversity measure comprises means for measuring the diversity of said entities in their interactions and their connections with their environment; ~~individual member of the unit;~~

(c) wherein said connectivity measure and said diversity measure each employs a recursive mathematical algorithm that employs a decay factor to account for the effects of indirect interactions among entities;

(d) providing a graphical object corresponding to each of said member entities and each person within said entities; ~~individual member of the unit;~~

(e) generating a graphical object corresponding to each member entity and each person within said entity, positioning said graphical objects to correspond to the relative positions of the individual members within the unit hierarchy;

(f) varying graphical properties of said graphical objects to correspond to the connectivity measure and the diversity measure;

(g) displaying on a display screen said graphical objects and interactions between  
on a display screen whereby the interactions between the individual member entities and  
persons members represented by said graphical objects are displayed. ~~and displaying on~~  
~~said display screen other related units within the organization.~~

6. (Currently Amended) The method of claim 5, wherein the said graphical properties of  
said graphical objects varied includes size of said graphical objects is varied according to  
the connectivity and/or diversity measure.

7. (Previously Presented) The method of claim 5, which further comprises providing for  
user selection of a portion of said display screen such that only those graphical objects  
within said user selected portion of said display screen are displayed.

8. (Currently Amended) The method of claim 5, which further comprises allowing for user selection of one of said ~~other-related~~ units such that interactions between individual members of said selected unit is graphically represented.

9. (Currently Amended) The method of claim 5 which further comprises displaying on said display screen direct interactions between the individual persons and indirect interactions between the individual persons to a preselected depth level. A method for graphically representing interactions between an individual person and other persons within an organization, which comprises:

——— ~~determining a connectivity measure for the interacting individual persons;~~  
~~determining a~~  
——— ~~diversity measure for the interacting individual persons;~~  
——— ~~providing graphical objects corresponding to the interacting individual persons;~~  
——— ~~varying graphical properties of said graphical objects to correspond to the~~  
~~connectivity measure and the diversity measure;~~  
——— ~~displaying on a display screen said graphical objects; and~~  
——— ~~displaying on said display screen direct interactions between the individual~~  
~~persons and indirect interactions between the individual persons to a preselected depth~~  
~~level.~~

10-11. (Cancelled)

12. (Previously Presented) The method of claim 9, wherein said preselected depth level may be user selected.

13-21. (Cancelled)

22. (New) A computerized method for interactive visual analysis of interactions among entities, where entities are individuals or groups, comprising:

(a) collecting interaction data among three or more entities, wherein each entity is an individual or a group of individuals, and wherein at least two entities directly interact with multiple entities;

(b) computer processing said collected interaction data with connectivity and diversity measures;

(i) wherein connectivity is a measure for assessing how well said entities are connected to their environments using a decay factor to account for the effects of indirect interactions among entities; and

(ii) diversity is a measure for assessing how diverse said entities are in their interactions with or connections to their environments using a decay factor to account for the effects of indirect interactions among entities; and

(c) wherein an environment of each entity comprises at least one entity; and

(d) displaying said processed interaction data and appropriate raw interaction data for interaction analyses.

23. (New) The method of claim 22, wherein said connectivity measure is a recursive mathematical algorithm that employs a decay factor to account for the effects of indirect interactions among entities and wherein the algorithm preferably has the formula:

$$C(E, L) = \sum_{1 \leq k \leq N} [w(k) + C(k, L-1)/f_d]$$
$$C(E, 0) = 0$$

where  $C(E, L)$  denotes connectivity of entity  $E$  at depth  $L$  where  $E$  has  $N$  direct interactions,  $w(k)$  is the weight of direct interactions from  $k$ , and  $f_d$  is the decay factor.

24. (New) The method of claim 22, wherein said diversity measure is a recursive mathematical algorithm that employs a decay factor to account for the effects of indirect interactions among entities and wherein the algorithm preferably has the formula:

$$D(E, L) = \sum_{1 \leq k \leq N} [v(k, p) + D(k, L-1)/f_d]$$
$$D(E, 0) = 0$$

where,  $D(E, L)$  denotes diversity of entity  $E$  at depth  $L$  where  $E$  has  $N$  direct interactions, and  $v(k, p) = 0$  if the property of  $k$  along the diversity dimension of interest is already within  $p$ , where  $p$  is a set of properties encountered so far, including the property of  $E$  or otherwise,  $v(k, p) = 1$ .

25. (New) The method of claim 22, wherein said collecting interaction data includes of one or more of the following: network surveys, monitoring of e-mail traffic, monitoring of telephone traffic, monitoring of access to shared resources.

26. (New) The method of claim 22, wherein said displaying processed interaction data comprises generating an organization view where interactions among entities of an organization are represented graphically.

27. (New) The method of claim 22, wherein displaying said processed interaction data comprises generating at least one of the following views:

(i) a group view where entities of a predefined group and their pre-specified attributes are represented graphically;

(ii) an individual view where interactions relating to a specific entity are represented graphically;

(iii) a cluster view where interactions among predefined units of entities are represented graphically.

(iii) a people map where said connectivity and diversity measures for predefined units of entities are represented graphically.

(iv) a topical view where the view generated is dependent upon a predetermined interaction topic.

28. (New) The method of claim 22, which further comprises generating a report based on results of the interaction analysis.

29. (New) A system for interactive visual analysis of interactions among three or more entities who are members of an organization, wherein each entity is a person or a group of persons and wherein at least two entities directly interact with multiple entities within

said organization and/or persons who are not members of said organization, the system comprising:

(a) a computer having a microprocessor and a storage unit;

(b) a database electronically coupled to said computer for storing interaction data among three or more entities, auxiliary information and any additional data derived from said interaction data, wherein each entity is an individual or a group of individuals, and wherein at least two entities directly interact with multiple entities;

(c) algorithms stored in said storage unit and operable by said microprocessor for measuring connectivity and diversity of entities based on their interactions, wherein connectivity is a measure for assessing how well said entities are connected to their environments and diversity is a measure for assessing how diverse said entities are in their interactions with or connections to their environment and wherein an environment of each entity comprises at least one other entity;

(d) a set of programs for accessing interaction data and generating views dynamically;

(e) a display screen electronically coupled to said computer for providing a user interface, said user interface providing appropriate controls for displaying and interactively manipulating each generated view;

(f) a user input device electronically coupled to said computer; and

(g) a user selectable element of said user interface being responsive to user input via said user input device to generate a report based on analysis results.

30. (New) A computerized method for interactive visual analysis of interactions among three or more entities who are members of an organization, wherein each entity is a person or a group of persons and wherein at least two entities directly interact with multiple entities within said organization and/or persons who are not members of said organization, the method comprising:

(a) collecting interaction data among said entities;

(b) computer processing said collected interaction data with a connectivity measure for assessing how well said entities are connected to their environments;

(c) wherein an environment of each entity comprises at least one other entity; and

(d) wherein said connectivity measure employs a decay factor to account for the effects of indirect interactions among entities and is a recursive mathematical algorithm in the form of

$$C(E, L) = \sum_{1 \leq k \leq N} [w(k) + C(k, L-1)/f_d]$$
$$C(E, 0) = 0$$

where  $C(E, L)$  denotes connectivity of entity  $E$  at depth  $L$  where  $E$  has  $N$  direct interactions,  $w(k)$  is the weight of direct interactions from  $k$ , and  $f_d$  is the decay factor;

(e) computer processing said collected interaction data with a diversity measure for assessing how diverse said entities are in their interactions with or connections to their environments, wherein said diversity measure employs a decay factor to account for the effects of indirect interactions among entities and is a recursive mathematical algorithm in the form of

$$D(E, L) = \sum_{1 \leq k \leq N} [v(k, p) + D(k, L-1)/f_d]$$

$$D(E, 0) = 0$$

where,  $D(E, L)$  denotes diversity of entity  $E$  at depth  $L$  where  $E$  has  $N$  direct interactions, and  $v(k, p) = 0$  if the property of  $k$  along the diversity dimension of interest is already within  $p$ , where  $p$  is a set of properties encountered so far, including the property of  $E$  or otherwise,  $v(k, p) = 1$ .

(f) displaying said processed interaction data and appropriate raw interaction data for interaction analyses.